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Date: October 3, 2007
Rebecca A. Bellas**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of:

Applicant(s): Avanzino

Examiner: Mahmoud Dahimene

Serial No: 10/726,992

Art Unit: 1765

Filing Date: December 3, 2003

Title: SOLUTIONS FOR CONTROLLED, SELECTIVE ETCHING COPPER

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Dear Sir:

Appellants' representative submits this Reply Brief in connection with an appeal of the above-identified patent application. This Reply Brief responds to the Examiner's Answer mailed August 16, 2007. In the event any additional fees may be due, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [AMDP1007US].

I. Status of Claims

Claims 1-20 stand rejected by the Examiner. The rejection of claims 1-20 is being appealed.

II. Grounds of Rejection to be Reviewed

- A.** Whether Uozumi and Kondo establish a *prima facie* case of obviousness for claims 1-3, 5, 7-11, 14, and 16 under 35 U.S.C. § 103(a).
- B.** Whether Uozumi, Kondo, and Miller establish a *prima facie* case of obviousness for claim 12 under 35 U.S.C. § 103(a).
- C.** Whether Uozumi, Kondo, and Shimazu establish a *prima facie* case of obviousness for claim 13 under 35 U.S.C. § 103(a).
- D.** Whether Uozumi, Kondo, and Singh establish a *prima facie* case of obviousness for claims 17-20 under 35 U.S.C. § 103(a).
- E.** Whether Uozumi, Kondo, and “admitted prior art” establish a *prima facie* case of obviousness for claims 4, 6, and 15 under 35 U.S.C. § 103(a).

III. Argument

Additional arguments are presented to rebut the Examiner's responses to the Appellants arguments and demonstrate factual inaccuracies in Section II.A. above.

A. One Skilled in the Art Would Not Have Modified Uozumi in the Manner Proposed by the Examiner

The Examiner contends on page 15 middle paragraph of the Examiner's Answer that Kondo shows Cu₂O passivation at a pH of 5.8 to 14 in Figure. This is FACTUALLY INCORRECT. The Appeal Board is invited to examine Figure 9 of Kondo and determine the pH range where passivation occurs. Passivation occurs at a pH of 7 to 12.5. Consequently, The passivation of Kondo does NOT overlap with the passivation of the claimed invention. This fact undermines the Examiner's central reasoning for the first rejection.

The Examiner contends on page 15 middle paragraph of the Examiner's Answer that Kondo "does not explicitly teaches against the use of citric acid-hydrogen peroxide solution for the purpose of forming a passivation layer...". Applicant agrees that Kondo does not EXPLICITLY state that the use of citric acid-hydrogen peroxide solution cannot form a passivation layer. However, Kondo does EXPLICITLY state that 1) passivation occurs at a pH of 7 to 12.5; 2) corrosion occurs at a pH of 0 to 7; 3) an acid such as citric acid (ph ~ 2.5) is used to make a material water soluble. THEREFORE, while Kondo does not EXPLICITLY state that the use of citric acid-hydrogen peroxide solution cannot form a passivation layer, Kondo does indeed teach that the use of citric acid-hydrogen peroxide solution CANNOT form a passivation layer. Again, this fact undermines the Examiner's central reasoning for the first rejection.

The Examiner in the last paragraph of page 15 states that "appellant's argument citing there is no suggestion in Kondo that passivation layer may be formed using an acidic solution...is not persuasive." However, it is a fact that Kondo clearly and unequivocally teaches that passivation occurs at a pH of 7 to

12.5. This cannot be disputed. This statement by the Examiner indicates that facts (which undermine the Examiner's position) cannot persuade the Examiner. Appellants respectfully request the Appeal Board to scrutinize the "facts" and basis for the Examiners positions.

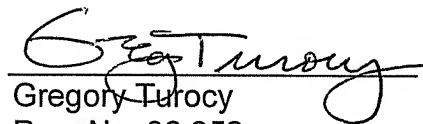
Finally, one key issue underlying this appeal is the replacement of a base solution (the first solution of Uozumi) with an acid solution (Kondo) in a situation where an ammonia complex is formed. Replacing a base solution with an acid solution is simply contrary to the basic fundamentals chemistry. The two are NOT equivalent. Especially when it comes to making an ammonia complex. The Examiner is using hindsight to rewrite Uozumi in an attempt to reject the pending claims. Without knowledge of the subject matter of the claims, NO ONE skilled in the art would have attempted modify the teachings of Uozumi in the manner contended by the Examiner.

IV. Conclusion

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-20 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [AMDP1007US].

Respectfully submitted,
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